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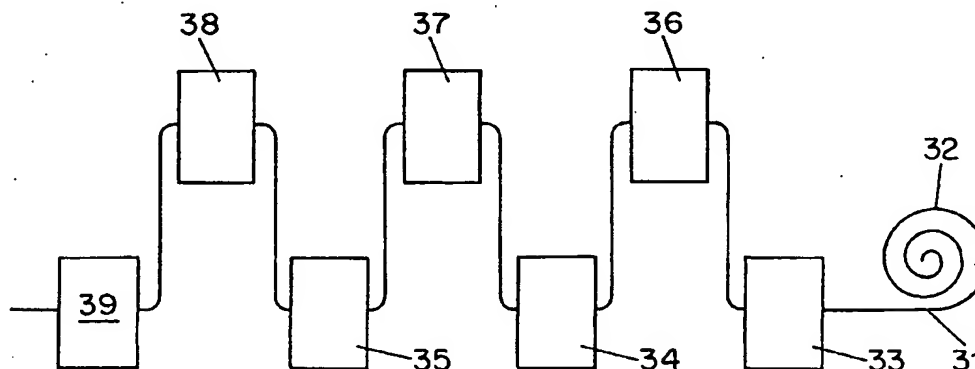
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(54) Title: CONTINUOUS PROCESS FOR MANUFACTURE OF DISPOSABLE ELECTRO-CHEMICAL SENSOR



(57) Abstract: Sensors formed from a substrate, an electrode layer and at least a first reagent layer are manufactured by transporting a continuous web of the substrate past at least two print stations, and printing the electrode layer and the first reagent layer on the substrate. One of the print stations prints the electrode layer on the continuous web of substrate, and the other of the print stations prints the first reagent layer on the continuous web of substrate as it is transported past the print stations. Additional print stations may be included for the printing of insulation layers, glue prints and the like. The order of printing will depend on the structure desired for the sensor, although the electrode layer(s) will frequently be deposited before the reagent layer(s).

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

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PCT/US 01/10097

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7    C12Q1/00      G01N27/28      G01N27/30      G01N33/487      G01N27/403

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7    G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 43075 A (GIRAULT HUBERT HUGUES ; LAGGER GREGOIRE (CH); LOYALL UWE (CH); METR) 1 October 1998 (1998-10-01)	1-14, 19, 20
Y	the whole document	15-18
Y	US 5 679 311 A (SCHUESSLER RUDOLF ET AL) 21 October 1997 (1997-10-21) column 1, line 62 -column 4, line 21	15-18
A	US 4 218 421 A (MACK JOHN C JR ET AL) 19 August 1980 (1980-08-19) column 2, line 48 -column 4, line 65	14-18

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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# INTERNATIONAL SEARCH REPORT

Interr Application No  
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9843075	A	01-10-1998	EP WO	0968416 A1 9843075 A1
				05-01-2000 01-10-1998
US 5679311	A	21-10-1997	DE EP JP JP US	4326339 A1 0637749 A2 2610109 B2 7077528 A 5609823 A
				09-02-1995 08-02-1995 14-05-1997 20-03-1995 11-03-1997
US 4218421	A	19-08-1980	NONE	